STN
USPATFULL
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L11 ANSWER 1 OF 16 USPATFULL on STN
AB A **crucible** used in the growth of polycrystal **silicon** by a **cast method** comprises a **crucible** body for, when solid material **silicon** is melted, containing the melted material **silicon**, and a material holder provided on the **crucible** body, for holding further material **silicon** on the material **silicon** loaded into the **crucible** body.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2002:162309 USPATFULL
TI Cruicible and growth method for polycrystal silicon using same
IN Katoh, Nobuyuki, Yoshino-gun, JAPAN
PI US 2002083886 A1 20020704
AI US 2001-994022 A1 20011127 (9)
PRAI JP 2000-367779 20001201
DT Utility
FS APPLICATION
LREP NIXON & VANDERHYE P.C., 8th Floor, 1100 Noth Glebe Road, Arlington, VA, 22201-4714
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 350
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 2 OF 16 USPATFULL on STN
AB A number of unique processes are disclosed for manufacture of sintered high-purity quartz glass products in which a shaped silica body or preform is made from an aqueous slurry of micronized silica particles by gel casting, slip casting or electrophoretic deposition. The silica particles may comprise a major portion by weight of crystalline silica. In one embodiment of the invention the sintered quartz glass is transparent, substantially bubble-free and suitable for scientific or optical uses. In another embodiment the porous silica preform is fired in steam to increase the hydroxyl content and then nitrided in a nitrogen-hydrogen reducing atmosphere. A minute amount of chemically-combined nitrogen in the high-purity quartz glass is sufficient to provide a tremendous improvement in physical properties and an incredible increase in the resistance to devitrification.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2002:100805 USPATFULL
TI Sintered quartz glass products and methods for making same
IN Loxley, Ted A., 3985 Ben Hur Ave., Willoughby, OH, United States 44094
Blackmer, John F., 3985 Ben Hur Ave., Willoughby, OH, United States 44094
Peters, Klaus-Markus, 3985 Ben Hur Ave., Willoughby, OH, United States 44094
PI US 6381986 B1 20020507
AI US 2000-481208 20000111 (9)
RLI Continuation of Ser. No. US 1997-804234, filed on 22 Feb 1997, now patented, Pat. No. US 6012304 Continuation of Ser. No. US 1994-269002, filed on 30 Jun 1994, now abandoned Continuation-in-part of Ser. No. US 1991-767691, filed on 30 Sep 1991, now patented, Pat. No. US 5389582
DT Utility
FS GRANTED
EXNAM Primary Examiner: Vincent, Sean
LREP Greene, Vincent A.
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)

LN.CNT 1777
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 3 OF 16 USPATFULL on STN
AB A process and apparatus for producing a high-quality polycrystalline semiconductor ingot with excellent crystallographic properties are disclosed. The interior of an airtight vessel is kept in an inert atmosphere for semiconductors. A raw semiconductor material is charged in a crucible, and the raw semiconductor material is heated by an induction heating coil so as to be melted. Then the bottom of the crucible is deprived of heat for causing the raw semiconductor material to solidify, thereby producing a polycrystalline semiconductor. The semiconductor crystal grows in one direction from the bottom to the top of the crucible while the heat emission is changed in accordance with a predetermined relationship for keeping the solidification rate of the raw semiconductor material constant.

AN 2000:113303 USPATFULL
TI Process and apparatus for producing polycrystalline semiconductor
IN Okuno, Tetsuhiro, Shiki-gun, Japan
PA Sharp Kabushiki Kaisha, Osaka, Japan (non-U.S. corporation)
PI US 6110274 20000829
AI US 1998-108371 19980701 (9)
PRAI JP 1997-177360 19970702
DT Utility
FS Granted
EXNAM Primary Examiner: Hiteshew, Felisa C.
LREP Birch, Stewart, Kolasch & Birch, LLP
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 1018

L11 ANSWER 4 OF 16 USPATFULL on STN
AB A number of unique processes are disclosed for manufacture of sintered high-purity quartz glass products in which a shaped silica body or preform is made from an aqueous slurry of micronized silica particles by gel casting, slip casting or electrophoretic deposition. The silica particles may comprise a major portion by weight of crystalline silica. In one embodiment of the invention the sintered quartz glass is transparent, substantially bubble-free and suitable for scientific or optical uses. In another embodiment the porous silica preform is fired in steam to increase the hydroxyl content and then nitrided in a nitrogen-hydrogen reducing atmosphere. A minute amount of chemically-combined nitrogen in the high-purity quartz glass is sufficient to provide a tremendous improvement in physical properties and an incredible increase in the resistance to devitrification.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 2000:3471 USPATFULL
TI Sintered quartz glass products and methods for making same
IN Loxley, Ted A., 3985 Ben Hur Ave., Willoughby, OH, United States 44094
Blackmer, John F., 3985 Ben Hur Ave., Willoughby, OH, United States 44094
Peters, Klaus-Markus, 3985 Ben Hur Ave., Willoughby, OH, United States 44094
PI US 6012304 20000111
AI US 1997-804234 19970222 (8)
RLI Continuation of Ser. No. US 1994-269002, filed on 30 Jun 1994 which is a continuation-in-part of Ser. No. US 1991-767691, filed on 30 Sep 1991, now patented, Pat. No. US 5389582
DT Utility
FS Granted

EXNAM Primary Examiner: Green, Anthony
LREP Greene, Vincent A.
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1820
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 5 OF 16 USPATFULL on STN
AB A method for treating thin silicon web crystals used to produce solar cells in order to remove complex SiOx contaminants from the web after growth. A dendritic silicon web with {111} surface orientation is immersed in a caustic solution of KOH or NaOH at a temperature at a range from about 80 to about 85.degree. C. for a period of about five to about ten minutes. The caustic solution quickly removes the SiOx contaminants, while leaving relatively unaffected the silicon crystal in the surface. After the caustic solution treatment, the web is rinsed in deionized water and optionally subjected to an acid cleaning with HCL or HF in order to remove any residual contaminants on the web surface.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 1999:69371 USPATFULL
TI Method for removing complex oxide film growth on silicon crystal
IN Bathey, Balakrishnan R., Upper St. Clair, PA, United States
PA Ebara Solar, Inc., Large, PA, United States (U.S. corporation)
PI US 5913980 19990622
AI US 1997-831606 19970410 (8)
PRAI US 1996-15148P 19960410 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Chaudhry, Saeed
LREP Graham & James LLP
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 259
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 6 OF 16 USPATFULL on STN
AB An apparatus and method for drying single or multiple parts or objects wherein the apparatus uses a drying chamber for containing said object or objects, said drying chamber having a closeable entryway for providing access to said drying chamber, the use of a sonic head disposed in said drying chamber attached to a source of drying liquid and an adjustable supply and drain attached to said drying chamber for introducing and removing said drying fluid to and from said drying chamber.

AN 97:67233 USPATFULL
TI Method and apparatus for drying parts and microelectronic components using sonic created mist
IN Ferrell, Gary W., 608 Terrace Ave., Half Moon Bay, CA, United States 94019
PI US 5653045 19970805
AI US 1995-484921 19950607 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Look, Edward K.; Assistant Examiner: Lee, Michael S.
LREP Rushford, Frank G.
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 16 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 709

L11 ANSWER 7 OF 16 USPATFULL on STN

AB A method and apparatus for removing particle, metallic and organic contamination from the wafers used in fabricating integrated circuits is disclosed. In the preferred embodiment, the method comprises the step of placing the wafers to be processed in a vessel or container constructed of a very pure metal, and upon which a surface oxide will quickly form in air. The metal vessel or container is then filled with a cleaning solvent such as sulfuric acid, and are ultrasonically vibrated to remove the contamination. The ultrasonic vibration causes an acoustic streaming of the sulfuric acid, leading to a microflow of the solvent across the surface of the wafer at speeds on the order of several meters per second. This microflow provides for an quick and efficient cleaning of the wafer at reduced temperatures, thereby increasing the overall throughput of the planar fabrication process. The apparatus comprises a vessel or container constructed from a very pure metal, and containing an acidic cleaning solvent. The metal vessel or container is coupled to an ultrasonic vibrating device which ultrasonically vibrates the vessel or container, thereby cleaning the wafers.

AN 96:29122 USPATFULL
TI Method and apparatus for cleaning integrated circuit wafers
IN Ferrell, Gary W., 608 Terrace Ave.,, Half Moon Bay, CA, United States 94019
PI US 5505785 19960409
AI US 1994-276202 19940718 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Kastler, Scott
LREP Rushford, Francis G.
CLMN Number of Claims: 21
ECL Exemplary Claim: 12
DRWN 16 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 786

L11 ANSWER 8 OF 16 USPATFULL on STN

AB Unique cristobalite-seeded quartz glass crucibles and cores admirably suited for Cz crystal growing and D.S. metal casting are formed by slip casting using a slurry containing a quartz refractory composition comprising silica particles with an average particle size of from 1 to 10 microns and a minute but effective amount of micronized dispersible particles of a unique crystallization aid, such as basic aluminum acetate, which provides the glass with at least 0.005 percent by weight of evenly dispersed metallic ions. The metallic ions provide the quartz glass with nucleation sites so that heating of the glass to a temperature of from 1200.degree. C. to 1250.degree. C. permits formation of a high concentration of evenly dispersed cristobalite nuclei in the glass without causing excessive devitrification prior to cooling of the seeded glass. The desired nucleation sites can also be provided by using micronized particles of alpha quartz or alpha cristobalite.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 95:13815 USPATFULL
TI Cristobalite reinforcement of quartz glass
IN Loxley, Ted A., 3985 Ben Hur Ave., Willoughby, OH, United States 44094
Blackmer, John F., 3985 Ben Hur Ave., Willoughby, OH, United States 44094
PI US 5389582 19950214
AI US 1991-767691 19910930 (7)
DCD 20081001
RLI Continuation-in-part of Ser. No. US 1990-523982, filed on 16 May 1990, now patented, Pat. No. US 5053359 which is a division of Ser. No. US 1989-328773, filed on 24 Mar 1989, now abandoned which is a continuation

of Ser. No. US 1988-225051, filed on 27 Jul 1988, now abandoned which is a continuation of Ser. No. US 1985-795645, filed on 6 Nov 1985, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Green, Anthony
LREP Greene, Vincent A.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1225
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 9 OF 16 USPATFULL on STN
AB A method of producing single-crystal silicon is disclosed. Polycrystalline silicon rod is formed from polycrystalline silicon granules, lumps or a mixture thereof by continuous casting through electromagnetic induction. Then, silicon single cyrstal is grown from the polycrystalline silicon rod by the FZ method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 93:39629 USPATFULL
TI Method for producing silicon single crystal from polycrystalline rod formed by continous casting
IN Kaneko, Kyojiro, Osaka, Japan
Mizumoto, Hideyuki, Osaka, Japan
Misawa, Teruoki, Hyogo, Japan
PA Osaka Titanium Co., Ltd., Hyogo, Japan (non-U.S. corporation)
PI US 5211802 19930518
AI US 1991-678192 19910401 (7)
PRAI JP 1990-85193 19900330
DT Utility
FS Granted
EXNAM Primary Examiner: Chaudhuri, Olik; Assistant Examiner: Garrett, Felisa
LREP Oblon, Spivak, McClelland, Maier & Neustadt
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 336
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 10 OF 16 USPATFULL on STN
AB A high-density silica glass article with excellent thermal shock characteristics is formed from a high purity vitreous silica containing an aluminum compound as a crystallization aid and having a dense concentration of cristobalite muclei. The aluminum compound is aluminum oxide, aluminum hydroxide, an aluminum salt, or other aluminum-oxide precursor.

A refractory **silica** glass **crucible** made according to the invention has remarkable advantages in a Czochralski crystal-growing process. The entire crucible can be crystallized during the initial melt down in the Cz furnace to provide a cristobalite inner surface which effectively resists attack by the molten silicon to minimize contamination problems during crystal growing.

Another embodiment of the invention relates to a unique drawn silica glass with good flexural strength having fibrous oriented veins of cristobalite embedded in a matrix of vitreous silica and having remarkable resistance to deformation at temperatures of 1500.degree. C. and higher as are encountered in certain ferrous casting and investment casting processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 91:79913 USPATFULL
TI Cristobalite reinforcement of high silica glass
IN Loxley, Ted A., Mentor, OH, United States
Wheaton, Harold L., Minerva, OH, United States
PA Pyromatics, Inc., Willoughby, OH, United States (U.S. corporation)
PI US 5053359 19911001
AI US 1990-523982 19900516 (7)
RLI Division of Ser. No. US 1989-328773, filed on 24 Mar 1989, now abandoned which is a continuation of Ser. No. US 1988-225051, filed on 27 Jul 1988, now abandoned which is a continuation of Ser. No. US 1985-795645, filed on 6 Nov 1985, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Bell, Mark L.; Assistant Examiner: Green, Anthony J.
LREP Greene, Vincent A.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1301
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 11 OF 16 USPATFULL on STN
AB A rapidly quenched, cast metallic strip is disclosed comprising a plurality of dissimilar portions, each portion metallurgically alloy-bonded during casting to adjacent portions along the longitudinal extent of the strip. In the method and apparatus for producing such strip a stream of molten metal is delivered onto a casting surface from a first crucible and at least one additional dissimilar stream of molten metal is delivered onto the casting surface such that a peripheral edge of the dissimilar stream contacts a peripheral edge portion of adjacent dissimilar metal to create a metallurgical alloy-bond therebetween during casting.

AN 84:66998 USPATFULL
TI Rapidly cast alloy strip having dissimilar portions
IN Ward, Brian L., Woking, England
PA Allegheny Ludlum Steel Corporation, Pittsburgh, PA, United States (U.S. corporation)
PI US 4485839 19841204
AI US 1983-459854 19830121 (6)
RLI Division of Ser. No. US 1980-199149, filed on 22 Oct 1980, now patented, Pat. No. US 4409296
DT Utility
FS Granted
EXNAM Primary Examiner: Lin, Kuang Y.; Assistant Examiner: Seidel, Richard K.
LREP Viccaro, Patrick J.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1,2
DRWN 10 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 761

L11 ANSWER 12 OF 16 USPATFULL on STN
AB A rapidly quenced, cast metallic strip is disclosed comprising a plurality of dissimilar portions, each portion metallurgically alloy-bonded during casting to adjacent portions along the longitudinal extent of the strip. In the method and apparatus for producing such strip a stream of molten metal is delivered onto a casting surface from a first crucible and at least one additional dissimilar stream of molten metal is delivered onto the casting surface such that a peripheral edge of the dissimilar stream contacts a peripheral edge portion of adjacent dissimilar metal to create a metallurgical alloy-bond therebetween during casting.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 83:46655 USPATFULL
TI Rapidly cast alloy strip having dissimilar portions
IN Ward, Brian L., Woking, England
PA Allegheny Ludlum Steel Corporation, Pittsburgh, PA, United States (U.S. corporation)
PI US 4409296 19831011
AI US 1980-199149 19801022 (6)
PRAI GB 1979-16035 19790509
DT Utility
FS Granted
EXNAM Primary Examiner: Lewis, Michael L.
LREP Viccaro, Patrick J.
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 790
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 13 OF 16 USPATFULL on STN
AB A method of densifying a fumed metal oxide is disclosed wherein the metal oxide is converted to a flowable sol and then dried to form a fragmented solid which is calcined. The calcined oxide may be wet milled to provide a slip for casting articles such as fused **silica** **crucibles** used in melting **silicon**. The method also permits the production of very refractory fused glass compositions from fumed metal oxides at temperatures substantially below those required where a melting step is employed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 80:20769 USPATFULL
TI Method of densifying metal oxides
IN Bihuniak, Peter P., Corning, NY, United States
Brandes, Lewis H., Campbell, NY, United States
Guile, Donald L., Horseheads, NY, United States
PA Corning Glass Works, Corning, NY, United States (U.S. corporation)
PI US 4200445 19800429
AI US 1978-895140 19780410 (5)
RLI Continuation-in-part of Ser. No. US 1977-791931, filed on 28 Apr 1977, now abandoned which is a division of Ser. No. US 1976-680061, filed on 26 Apr 1976, now patented, Pat. No. US 4042361
DT Utility
FS Granted
EXNAM Primary Examiner: Bashore, S. Leon; Assistant Examiner: Miga, Frank W.
LREP Janes, Jr., Clinton S.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 625
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 14 OF 16 USPATFULL on STN
AB A process is disclosed for making vitreous **silica** **crucibles** of exceptional high quality for use in the growing of a **silicon** crystal from molten **silicon**. The **crucibles** are formed from fine particles of high purity fused silica by slip casting or other suitable process, are dried and fired to provide a rigid porous body, and are thereafter sintered to a high density, preferably to the transparent state. The invention solves the problem of spalling, blistering and cracking during crystal growing and the resulting contamination of the molten silicon, which has long plagued the industry, by eliminating water from the fused silica

particles before the porous body is sintered to the transparent state. Said body is thoroughly dried in a vacuum furnace at a high temperature and at a sub-atmospheric pressure low enough to remove the chemically bound water which cannot be removed by heat alone. The crucibles of this invention retain their transparency and high quality without spalling or introducing microscopic particles of silica into the silicon, thereby making it possible to grow a silicon crystal of highest quality without dislocations and imperfections due to contamination by said particles.

AN 78:7141 USPATFULL
TI Vacuum process for avoiding devitrification damage to transparent slip-cast **silica crucibles**
IN Loxley, Ted A., Mentor, OH, United States
Barber, Walter G., Mentor, OH, United States
Combs, Walter W., Mentor, OH, United States
Webb, John M., Chagrin Falls, OH, United States
PA Sherwood Refractories, Inc., Cleveland, OH, United States (U.S. corporation)
PI US 4072489 19780207
AI US 1976-684730 19760510 (5)
DCD 19910924
RLI Continuation-in-part of Ser. No. US 1974-495129, filed on 5 Aug 1974, now patented, Pat. No. US 3972704 which is a continuation-in-part of Ser. No. US 1973-363622, filed on 24 May 1973, now patented, Pat. No. US 3837825
DT Utility
FS Granted
EXNAM Primary Examiner: Lindsay, Jr., Robert L.; Assistant Examiner: Miga, Frank W.
LREP Bosworth, Sessions & McCoy
CLMN Number of Claims: 7
ECL Exemplary Claim: 7
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1023

L11 ANSWER 15 OF 16 USPATFULL on STN
AB Apparatus is disclosed for automated mass production of precision transparent silica glass products in accordance with a unique process in which slip-cast fused silica articles are rapidly heated and sintered in a vacuum or in a helium or hydrogen atmosphere at high temperatures, such as 2950.degree. to 3150.degree.F. A heated graphite susceptor shaped to conform to the outer surface of the fused silica article is automatically moved between a cooling zone and an induction furnace chamber which is opened momentarily to admit the article. The furnace and the graphite susceptor are designed to cause the trapped gases in the article to move radially outwardly and to effect rapid heating so as to avoid substantial devitrification during sintering.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 76:42655 USPATFULL
TI Apparatus for making vitreous silica receptacles
IN Loxley, Ted A., Mentor, OH, United States
Barber, Walter G., North Perry, OH, United States
Combs, Walter W., Mentor, OH, United States
Webb, John M., Chagrin Falls, OH, United States
PA Sherwood Refractories, Inc., East Cleveland, OH, United States (U.S. corporation)
PI US 3972704 19760803
AI US 1974-495129 19740805 (5)
RLI Continuation-in-part of Ser. No. US 1973-363622, filed on 24 May 1973, now patented, Pat. No. US 3837825 which is a continuation-in-part of Ser. No. US 1971-135140, filed on 19 Apr 1971, now abandoned
DT Utility

FS Granted
EXNAM Primary Examiner: Bashore, S. Leon; Assistant Examiner: Miga, Frank W.
CLMN Number of Claims: 8
ECL Exemplary Claim: 7
DRWN 5 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1249
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L11 ANSWER 16 OF 16 USPATFULL on STN
AB A crucible formed from pulverized particles of fused quartz is fired and vacuum dried to remove all water and is thereafter placed on a heated graphite form or susceptor shaped to conform to the surface of said article and rapidly heated in an induction furnace to a high temperature, in the range of about 3000.degree.F. to about 3150.degree.F. The crucible is maintained at a temperature in such range in a vacuum or in a helium atmosphere for a period of at least one minute sufficient to obtain full density while avoiding substantial devitrification. The vacuum drying preferably provides the glass of the crucible with an infrared absorption beta OH factor below .01 at a wavelength of 3.5 microns. A unique apparatus is provided to carry out the process rapidly and efficiently without forming significant amounts of cristobalite and to cause gases trapped in the crucible to move radially outwardly. The process minimizes devitrification and can be employed for mass production of precision transparent amorphous quartz glass products having excellent resistance to thermal shock.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN 74:44533 USPATFULL
TI PROCESS FOR MAKING TRANSPARENT SILICA GLASS
IN Loxley, Ted A., Mentor, OH, United States
Barber, Walter G., North Perry, OH, United States
Combs, Walter W., Mentor, OH, United States
Webb, John M., Chagrin Falls, OH, United States
PA Sherwood Refractories, Inc., East Cleveland, OH, United States (U.S. corporation)
PI US 3837825 19740924
AI US 1973-363622 19730524 (5)
RLI Continuation-in-part of Ser. No. US 1971-135140, filed on 19 Apr 1971, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Bashore, S. Leon; Assistant Examiner: Miga, Frank W.
CLMN Number of Claims: 22
DRWN 5 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1192
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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(FILE 'HOME' ENTERED AT 07:05:42 ON 22 SEP 2003)

FILE 'USPATFULL, USPAT2' ENTERED AT 07:05:47 ON 22 SEP 2003
L1 2052 S (CRUCIBLE#)(8A)(SI OR SILICON)
L2 799 S (CRUCIBLE#)(8A)(SIO2 OR SILICA)
L3 25534 S (CAST?(6A)METHOD?)
L4 86 S (DETACH?(8A)CRUCIBLE)
L5 21312 S (PARALLELEPIP?)
L6 163465 S (VARY? OR CONTROL? OR ALTER? OR DIFFER?)(8A)(CRUCIBLE(6A)THIC
L7 27005 S (POLYCRYSTAL?(8A)SILICON)
L8 569630 S (RECTANG?)
L9 9780 S (RECTANGULAR(4A)PARALLELEPIP?)
L10 1 S L2 AND L3 AND L4 AND L6 AND L9

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L11          16 S L1 AND L2 AND L3
L12           1 S L9 AND L11

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